Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.- 57. (cancelled)

58. (new) A process for the production of an amphiphilic nanoscale particle that comprises a hydrolyzable lipophilic moiety on a surface thereof, which process comprises (a) subjecting at least one hydrolyzable compound which comprises at least one hydrolyzable lipophilic group to a hydrolysis and condensation reaction with a substoichiometric amount of water to obtain a plurality of amphiphilic nanoscale particles and (b) removing liquid to obtain the plurality of amphiphilic nanoscale particles in a form of a powder.

59. (new) The process of claim 58, wherein the at least one hydrolyzable compound comprises at least one of (i) a hydrolyzable metal or semimetal compound which comprises at least one hydrolyzable lipophilic group and may comprise one or more non-hydrolyzable groups and (ii) a condensation product derived from the at least one hydrolyzable compound.

60. (new) The process of claim 59, wherein the at least one hydrolyzable compound comprises an alkoxide.

61. (new) The process of claim 59, wherein the at least one hydrolyzable compound comprises at least one of (i) a compound of at least one of Mg, Si, Ge, Al, B, Zn, Cd, Ti, Zr, Ce, Sn, In, La, Fe, Cu, Ta, Nb, V, Mo or W and (ii) a condensation product derived therefrom.

62. (new) The process of claim 58, wherein at least one hydrolyzable lipophilic moiety comprises at least four carbon atoms.

63. (new) The process of claim 58, wherein the at least one hydrolyzable moiety comprises at least one of an alkoxy, alkenyloxy, alkynyloxy, aryloxy, aralkyloxy, alkaryloxy, ether, acyloxy, alkyl or acyl group.

64. (new) The process of claim 63, wherein at least one hydrolyzable moiety is fluorinated.

65. (new) The process of claim 58, wherein the at least one hydrolyzable moiety comprises a C_4-C_{20}-alkoxy group.

66. (new) The process of claim 65, wherein the at least one hydrolyzable moiety comprises at least one of a pentoxy group and a hexoxy group.

67. (new) The process of claim 58, wherein the at least one hydrolyzable moiety is derived from a hydrolyzable precursor of the particle.

68. (new) The process of claim 58, wherein the particle comprises one or more optionally hydrated oxides of one or more metals or semimetals.

69. (new) The process of claim 58, wherein a mean diameter of the plurality of particles is not higher than 200 nm.

70. (new) The process of claim 58, wherein a mean diameter of the plurality of particles is not higher than 100 nm.

71. (new) The process of claim 58, wherein a mean diameter of the plurality of particles is from 2 nm to 50 nm.

72. (new) The process of claim 58, wherein a molar ratio of water to hydrolyzable lipophilic groups is not higher than 0.8 : 1.

73. (new) The process of claim 72, wherein the molar ratio is not higher than 0.6 : 1.

74. (new) The process of claim 72, wherein the molar ratio is not higher than 0.5 : 1.

75. (new) The process of claim 72, wherein the molar ratio is from 0.25 : 1 to 0.5 : 1.

76. (new) The process of claim 72, wherein the molar ratio is about 0.45 : 1.

77. (new) The process of claim 58, wherein the hydrolysis and condensation reaction is carried out at a temperature of at least 40°C.

78. (new) The process of claim 77, wherein the reaction is carried out at a temperature of at least 100°C.

79. (new) The process of claim 77, wherein the reaction is carried out at a temperature of at least 200°C.

80. (new) The process of claim 58, wherein the hydrolysis and condensation reaction is carried out with heating and under pressure.

81. (new) The process of claim 58, wherein the process further comprises reacting the amphiphilic nanoscale particle with a surface modifier to provide the particle with one or more functional groups on a surface thereof.

82. (new) The process of claim 81, wherein the reaction with the surface modifier is carried out in a solvent.

83. (new) The process of claim 81, wherein the surface modifier comprises at least one of a saturated or unsaturated carboxylic acid, a,β-dicarbonyl compound, an amine, a phosphonic acid, a sulfonic acid and a silane.

84. (new) The process of claim 81, wherein in addition to at least one functional group for attachment or complexation to the surface of the particle, the surface modifier comprises at least one further functional group.

85. (new) The process of claim 81, wherein the surface modifier comprises a complexing agent.

86. (new) A process for the production of an amphiphilic nanoscale particle that comprises a hydrolyzable lipophilic moiety on a surface thereof, which process comprises (a) subjecting at least one hydrolyzable compound which comprises at least one hydrolyzable lipophilic group to a hydrolysis and condensation reaction with an amount of water which results in a molar ratio of water to hydrolyzable lipophilic groups of not higher than 0.8 : 1 to obtain a plurality of amphiphilic nanoscale particles having a mean diameter of not higher than 200 nm and (b) removing liquid to obtain the plurality of amphiphilic nanoscale particles in a form of a powder.

87. (new) The process of claim 86, wherein at least one hydrolyzable lipophilic moiety comprises at least four carbon atoms.

88. (new) The process of claim 87, wherein the hydrolysis and condensation reaction is carried out at a temperature of at least 100°C.